

PLANE ANTENNA

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Abstract of JP 11298230 (A)

PROBLEM TO BE SOLVED: To provide a plane antenna which can secure the bowl-shaped beam characteristic and also can secure the circularly polarized characteristic against a wide angle by attaching an upper dielectric layer to the upper stage of a conductor plate with plural lower dielectric layers including at least an air layer attached to the lower stage of the conductor plate respectively.

SOLUTION: A plane antenna has a multi-layer plane structure including vertically an upper dielectric layer 400, a conductor plate 410 and then a lower dielectric layer 420. A ring slot radiation element 430 which is formed by drilling a ring-shaped hole through the plate 410 functions as an antenna. Then the element 430 is designed to secure the bowl-shaped beam characteristic having low gains in its front direction and to generate the secondary resonance with a given frequency. The layer 420 is attached to the lower stage of the plate 410 to increase the antenna gains. In this case, the dielectric constant of the layer 420 is set higher than that of the layer 400 in order to increase the front/rear ratio of an antenna radiation pattern.

